

KARPENKO, A.S.

Basic features of vegetation in the Indigirka Lowland. Bot. zhur.
43 no.1:70-75 Ja '58. (MIRA 11:2)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR, Leningrad.
(Indigirka Valley--Botany--Ecology)

KARPENKO, A. S.

Specific features of the vegetation cover of Pskov Province
as related to principal factors of the geographical environment
~~Rat.~~ zhur. 45 no.5:667-683 My '60. (MIRA 13:7)
(Pskov Province--Phytogeography)

SOCHAVA, V.B.; ISACHENKO, T.I.; KARPENKO, A.S.

Zonal division of the Baltic Sea region of the Soviet
Union on the basis of a medium-scale geobotanical map.
Bot.zhur. 45 no.6:795-804 Je '60. (MIRA 13:7)

i. Botanicheskiy institut im. V.L.Komarova Akademii nauk
SSSR, Leningrad.
(Baltic Sea region--Phytogeography)

KARPENKO, A.S.

Methods of generalization in geobotanical mapping. Bot. zhur. 45
no.9:1301-1308 S '60. (MIRA 13:9)

1. Botanicheskiy institut im. V.I. Komarova Akademii nauk SSSR, Leningrad.
(Phytogeography--Maps)

GRIBOVA, S.A.; KARPENKO, A.S.

Conference on the mapping of vegetation. Izv. AN SSSR. Ser. biol.
26 no.5:823-827 S-0 '61. (MIRA 14:9)
(PHYTOGEOGRAPHY--MAPS)

YURKOVSKAYA, T.K.; KARPENKO, A.S.

First Conference on the geobotanical investigation of bogs. Bot. zhur.
46 no. 5:750-755 My '61. (MIRA 14:7)

1. Institut biologii Karel'skogo filiala AN SSSR, Petrozavodsk i
Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.
(Swamps)

KARPENKO, A.S.

Discussion of the book "Steppe vegetation of northern Kazakhstan"
at the Komarov Botanical Institute of the Academy of Sciences of
the U.S.S.R. Bot. zhur. 47 no.9:1395-1396 S '62. (MIRA 16:5)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.
(Kazakhstan—Steppe flora)

KARPENKO, A.S.

Scientific seminar at the Department of Geobotany of the
Komarov Botanical Institute of the Academy of Sciences of the
U.S.S.R. in 1961-1962. Bot.zhur. 47 no.11:1706-1707 N '62.

(MIRA 16:1)

1. Sekretar' nauchnogo seminaru otdela geobotaniki Botanicheskogo
instituta imeni V.L.Komarova AN SSSR, Leningrad.
(Botany—Ecology)

KARPENKO, A.S.

Discussion on three compendiums of geobotany at the Department of
Geobotany of the Komarov Botanical Institute. Bot. zhur. 48
no.12:1857-1860 D '63. (MIRA 17:4)

i. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.
Sekretar' Nauchnogo seminara otdela geobotaniki Botanicheskogo
instituta AN SSSR.

KARPENKO, A.S.

Work of the scientific seminar of the Geobotany Department of the Komarov Botanical Institute of the Academy of Sciences of the U.S.S.R. in 1962-1963. Bot. zhur. 49 no.1:156-159 Ja '64. (MIRA 17:2)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.

DAVYDOV, A.B., kand. tekhn. nauk; KARPENKO, A.S., inzh.

Lengthening the life of the blading of centrifetal turboexpanders.
Trudy VNIIMASH no.8:90-107 '64.

(MIRA 17:10)

KARPENKO, A.S.

Phytogeography of the lower Amur valley; analysis of a new phyto-
geographical map. Bot.zhur. 49 no.10:1408-1420 0 '64, (MIRA 18:1)

1. Botanicheskiy institut imeni V.I.Komarova AN SSSR, Leningrad.

GRIBOVA, S.A.; ISACHENKO, T.I.; KARPENKO, A.S.; LIPATOVA, V.V.

Viktor Borisovich Sochava, 1905; on his 60th birthday. Bot. zhur. 50
no.6:880-894 Je '65. (MIRA 18:7)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

L 26520-66 EWT(1) GW/GS

ACC NR: AT5027652

SOURCE CODE: UR/0000/65/000/000/0023/0032

AUTHOR: Karpenko, A.S.

ORG: none

28
B+1

TITLE: Reflection of the dynamics of south tayga vegetation upon large scale geobotanical maps

SOURCE: AN SSSR. Botanicheskiy institut. Geobotanicheskoye kartografirovaniye (Geobotanical mapping), 1963. Moscow, Izd-vo "Nauka", 1965, 23-32

TOPIC TAGS: geographical survey, mapping, plant ecology

ABSTRACT: The dynamic principle in the presentation ("reflection") of the regularities in the transformations of the vegetation cover on geobotanical maps is being developed by the French and German schools of geobotanical cartography. In the SSSR, the realization of this approach dates from 1928. Major efforts are, however, of more recent origin (1959). The dynamic transformations of the south tayga forest vegetation are most frequently related to antropogenic causes, - forest fires, forest exploitation, conversion to farmland and farming abandonment. In arid and mountainous regions, major vegetation changes are known to be fast; in the plains of the southern tayga, except in the marches, these changes are quite slow and thus cannot be reflected in maps. However, certain phytogenic changes, e.g. in the composition of vegeta-

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011-66 EWT(d)/FBI/EWT(l)/EWP(e)/EWT(m)/EEG(k)-2/T/EWP(k) IJP(c) WC/WH
SOURCE CODE: UR/0432/66/000/004/0040/0042

NR: AP6029519

AUTHOR: Bayborodin, Yu. V. (Candidate of technical sciences); Kravchenko, V. I.;
Kabanov, E. N.; Karpenko, A. S.; Kozin, A. V.; Petrenko, R. A.; Shaposhnikov, B. V.

ORG: none

TITLE: A Q factor modulator for a ruby laser

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 4, 1966, 40-42

TOPIC TAGS: solid state laser, laser modulation, laser pulsation

ABSTRACT: A Q factor modulator that increases the output pulse power of a ruby laser by 10^3 is described. The modulator is made up of an optical head and an electronic unit. The optical head consists of a rotating prism with total internal reflection that acts as one of the mirrors of the laser optical resonator; it is driven at angular speeds up to 26×10^3 rpm by a dc motor. The electronic unit consists of a square wave generator, a comparator circuit, two time delay networks, a trigger circuit, a dc motor, and a power supply. The modulator operates in the following manner: at a given angular position of the prism with respect to the laser beam, light from a lamp is focused through a lens and illuminates a photosensitive diode. The output pulse of the photodiode is amplified and fed to the comparator. When the rotational speeds of the motor and the prism are equal, the comparator initiates a pulse that lights the laser pumping lamp and thus triggers the laser. At the same time, the

UDC: 621.378.325

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58
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13041-66

NR: AP6029519

motor is stopped and the laser is not triggered again until the motor builds up its speed until it is equal to that of the prism. The motor has an automatic disconnect relay which stops it in 5 to 7 seconds if a faulty condition occurs in the circuit. As a result of work with the modulator, optimum parameters for the optical resonator, rotation speed of the reflector, and pumping power have been determined in order to obtain maximum output pulse power. Orig. art. has: 2 figures. [IV]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001 ATD PRESS

5067

Card

2/2

ZAMPENKO, A. Ye. *Dokl. Akad. Nauk SSSR* (Engl. transl.) "Exocrine function of the pancreas during radiation sickness in dogs having normal and functionally weakened cerebral cortex", Leningrad 1960, 18:11, (in tribute of Physiology Acad. I. P. Pavlov).

(RL, 30-40, 110)

AUTHOR
TITLE

KARPENKO, B.K., Eng , PROKOF'YEV, YU.A.

105-6-19/26

A Device on an Oscillograph for Recording the Run-Down Angle of the
the Rotor of a Synchronous Machine
(Ustroystvo zapisi na ostsillografe ugla ybega rotora sinkhronnoy
mashiny - Russian)

PERIODICAL

Elektrichestvo, 1957, Nr 6, pp 74 - 76 (U.S.S.R.)

ABSTRACT

A donor of the angle θ , which is of comparative structural simplicity, is described. It facilitates immediate recording on the oscillograph, has no inertia, and can be used for the recording of processes with practically unlimited variability of this angle. The donor may have very high accuracy and depends on the parameters of the elements used. The system consists of three elements - the impulse giver, the transformer - consisting of a thyatron, an electron tube, an RC member - and an amplifier; In order to avoid the disadvantage accompanying the use of filters (inertia), an RC member, which is switched on to the rectangular voltage wave, is used. Systems with one thyatron and one diode and a system with two thyatrons and one discharge disk are described. In the former case θ is fixed on the oscillogram after 0,02 sec, in the latter case this is the case after 0,01 sec. In order that the RC circuit may not exercise any influence on the anode circuit, the resistance R should be as great as possible.
(5 illustrations and 1 Slavic reference).

~~Card 1/2~~*Kiev Polytech Inst.*

KARPENKO, B. K. Doc Tech Sci -- (diss) "Asynchronous moments of synchronous machines with compensation of excitation-circuit resistance." Kiev, 1959. 13 pp with ~~charts~~ (Min of Higher Education UkSSR. Kiev Order of Lenin Polytechnic Inst. Chair of Electrical Machines), 100 copies (KL, 46-59, 136)

8(3)

SOV/105-59-5-20/29

AUTHOR: Karpenko, B. K., Engineer

TITLE: Determining a Constant Common Amplification Coefficient of an Electrodynamic Amplifier Working With an Electronic Amplifier (Polucheniye postoyannogo obshchego koeffitsiyenta usileniya elektromashinnogo usilitelya, rabotayushchego sovmestno s elektronnyim usilitelem)

PERIODICAL: Elektrichestvo, 1959, Nr 5, pp 80-82 (USSR)

ABSTRACT: If one or several control windings of the electrodynamic amplifier (EDA) are fed by an electronic amplifier (EA), it is convenient to design an EA with such a characteristic that the common amplification coefficient of the EDA and of the EA remains unchanged. To this end, the product of the tangents of the angles of inclination in the amplification characteristics must remain constant over the whole range of signal changes. The difficulty of this task is the circumstance that the no-load characteristic of the EDA is not unambiguous but is expressed by a hysteresis loop depending on the initial magnetization. The task is simplified by representing the no-load characteristic of the EDA in form of three sections of straight lines. In such case, there are no particular

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SOV/105-59-5-20/29

Determining a Constant Common Amplification Coefficient of an Electrodynamic Amplifier Working With an Electronic Amplifier

difficulties in determining the common constant coefficient. The determination of the demanded characteristic of the EA is shown in figure k. Figure 2 shows the circuit diagram of an EA which satisfies the required conditions. In consideration of the approximation of the no-load characteristic of the EDA by 3 sections of straight lines, the EA described here offers no possibility of obtaining an exactly invariable common amplification coefficient. The EA is connected according to the diagram of a parallel equilibrium of 6P3 tubes and - except for the 6Kh6 tubes - does not differ from ordinary d.c. amplifiers with a constant amplification coefficient. To obtain the nonlinearity demanded in the circuit diagram, a 6Kh6 twin diode is used. A positive retardation potential is brought near its cathode. The value of this potential can be regulated by a potentiometer. As long as the voltage of the input signal is smaller than the retardation voltage, the 6Kh6 tube does not affect the work of the wiring, and the amplifier yields the maximum amplification. When the anode potential becomes greater than the retardation potential brought near the cathode, the diode begins to let through the electric

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SOV/105-59-5-20/29

Determining a Constant Common Amplification Coefficient of an Electrodynamic Amplifier Working With an Electronic Amplifier

current, and the input of the amplifier is shunted by the resistor r_4 or r_5 according to the polarity of the signal given. By changing r_4 and r_5 , any gradient of the characteristic towards the point of inflection can be obtained. The characteristic of the EA without the 6Kh6 tube is an envelope of the whole family of characteristics. The point of inflection can be obtained in any spot of this envelope. The total gradient of the characteristic before and after the point of inflection is determined in dependence on the necessary amplification coefficient by means of the resistor r_1 and the current reverser P_2 which shunt the input of the amplifier. The amplifier is very convenient for work in the laboratory as it can produce practically any characteristic. In spite of the mentioned shortcoming, the EA described here greatly increases the accuracy of regulation in the wirings with an EDA. The amplifier can also be used in wirings with an invariable polarity of the signal where the influence of hysteresis is unimportant. There are 5 figures and 1 Soviet reference.

Card 3/4

Kiev Polytech Inst.

8(2)

AUTHOR:

Karpenko, B. K., Engineer

SOV/105-59-10-13/25

TITLE:

Compensation of the Resistances in Slow-speed Processes

PERIODICAL:

Elektrichestvo, 1959, Nr 10, pp 68-72 (USSR)

ABSTRACT:

It is shown here that slow-speed processes allow for compensation of the ohmic resistance and reactance with the help of circuit diagrams similar to those of automatic control. The time constants of the circuit-diagram elements greatly influence the compensating resistance. The author demonstrates that the compensating resistance greatly depends on the frequency at large values of the time constants. The value of the compensating resistance is easily obtained from the amplitude-versus-phase characteristics of the open system. It is recommended to choose the compensating resistance according to the stability conditions of the system: In rapid-speed processes, the corresponding point on the amplitude-versus-phase characteristics is found near the origin of coordinates. This is why the equivalent circuit resistance is here almost equal to the natural one (without compensation). This is exemplified in an appendix by the

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Compensation of the Resistances in
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investigation of a circuit diagram for resistance compensation by means of a rotary amplifier as shown in figure 3. In conclusion, the formulas required for calculating the circuit diagram are written down. There are 6 figures, 1 table, and 8 Soviet references.

ASSOCIATION: Kiyevskiy politekhnicheskii institut (Kiyev Polytechnic Institute)

SUBMITTED: July 7, 1958

Card 2 /2

KARPENKO, B.K.

Elimination of dead bands in transducers and amplifiers using
ferromagnetic materials. Elektrichestvo no.7:84-86 JI '61.
(MIRA 14:9)

1. Kiyevskiy politekhnicheskij institut.
(Transducers) (Amplifiers)

VASIL'YEV, Yu.K., kand. tekhn. nauk; KARPENKO, B.K., kand. tekhn. nauk;
KRAVTSOV, O.K., inzh.; MURASHKO, V.A., inzh.; IVANOVA, I.G., inzh.

Direct current motor with printed armature winding.
Energ. i elektrotekh. prom. no.1:25-28 Ja-Mr'64.

(MIRA 17:5)

1977-1978

... theory and design of an ...

... Complete ...

L 51295-65 EPA(*)-2/ENT(1)
ACCESSION NR: AP5009790

UR/0292/65/000/004/0025/0028
621.315.2

AUTHOR: Karpenko, B. K. (Candidate of technical sciences)

TITLE: Small-inertia d-c motors for high-speed automatic systems

SOURCE: Elektrotehnika, no. 4, 1965, 25-28

TOPIC TAGS: dc motor, small inertia dc motor, micromotor 29

ABSTRACT: General considerations re printed-winding disk-armature, hollow-cylindrical-armature, and toothless-armature motors are presented. The effect of magnetic loading on the slot configuration, at high gap flux densities, is theoretically investigated. The advantages and disadvantages of the disk and cylindrical armatures are examined: the printed disk armature is simpler to manufacture than the cylindrical; however, the former has a higher magnetic leakage than the latter; the maximum high speed (a 2-3 times shorter time constant) can be obtained from a hollow cylindrical armature carrying a printed winding. Orig. art. has: 5 figures, 21 formulas, and 3 tables.

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L 51295-65

ACCESSION NR: AP5009790

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NO REF SOV: 011

OTHER: 000

332
Card 2/2

KARPENKO, B.K., kand. tekhn. nauk (Kiyev); IVANOVA, I.G. (Kiyev)

Design of the magnetic circuit of a motor with printed winding.
Elektrichestvo no.3:48-52 Mr '65. (MIRA 18:6)

KARSHENKO, B.E., kand. tekhn. nauk; IVANOVA, I.I., inzh.; GANUSHINA, M.G.,
inzh.; SHCHERBINA, B.A., inzh.

A d.c. motor with printed armature winding. Energ. i elektrotekh.
prom. no. 3:53-36 31-3 '65. (MIRA 18:9)

L 10999-66 EWT(1)/ETC(F)/EWG(m)/EWA(h) TT/AT

ACC NR: AP6001976

SOURCE CODE: UR/0105/65/000/003/0048/0052

AUTHOR: Karpenko, B. K. (Candidate of technical sciences; Kiev); Ivanova, I. G. 112
(Engineer; Kiev) 03

ORG: none

TITLE: Magnetic circuit calculation for a motor with printed windings 25

SOURCE CODE: Elektrichestvo, no. 3, 1965, 48-52

TOPIC TAGS: magnetic circuit, magnet, electric motor, electric engineering, electric rotating equipment part

ABSTRACT: The article presents a method for calculating the magnetic circuit of a printed-circuit motor with a face-type air-gap. The purpose of this project is to determine the optimum magnet shape and dimensions, to evaluate the need for soft-iron pole shoes and to determine the effect of stabilization on the magnitude of useful flux. The design calculations were made on a per pole basis for three different airgaps (1 mm, 2 mm, 3 mm). First the magnet length, the magnet cross-section and the pole shoe cross-section were varied, the leakage flux was assumed to be concentrated at the ends. On the basis of plotted curves of useful flux vs. magnet length it was found that the pole shoe becomes ineffective for a pole width greater than 50% of the pole pitch; maximum useful flux was obtained at 80% pole pitch without shoes. More accurate results and better agreement with test data is obtained without assuming a concentrated leakage flux and by considering the effect of the airgap dimensions on the leakage flux. For this purpose the magnet is divided into n sections and each

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UDC: 621.313.226:044

L 10999-66

ACC NR: AP6004976

section is calculated by the equivalent electric circuit method also by using the demagnetization characteristics. The number of sections n must be chosen so that the results do not differ by more than a few percent from those obtained with $n-1$ sections ($n=4$ was found to be sufficient for a 30-mm long magnet). The method described here and the method of successive integration were both used to calculate certain special magnet shapes (pyramidal) and both gave practically the same results. In designing the motor it is possible to use either a single magnet on one side or two magnets which should be located symmetrically. The latter case gave 30% more useful flux. In conclusion, the Russian motor model PDR-6 (single magnet) is compared with the French motor model TM-510 of the same size with respect to essential design parameters and performance characteristics. Orig. art. has: 6 figures. JPRS

SUB CODE: 09 / SUBM DATE: 21Oct64 / ORIG REF: 005


Card 2/2

L 35840-66 EWT(1)

ACC NR: AP6015344

SOURCE CODE: UR/0119/66/000/005/0024/0026

AUTHOR: Vaynberger, G. Ya. (Engineer); Vasil'yev, Yu. K. (Candidate of technical sciences); Karpenko, B. K. (Candidate of technical sciences); Kabkov, G. Ya. (Engineer); Larchenko, V. I. (Engineer); Rybal'chenko, Yu. I. (Engineer) 21
B

ORG: none

TITLE: Stepping motors ²⁴

SOURCE: Priborostroyeniye, no. 5, 1966, 24-26

TOPIC TAGS: stepping motor, micromotor, servomotor / RShD gear stepping servomotor, EShD stepping servomotor ²⁴ ₁₀

ABSTRACT: A very brief description is supplied of (1) RShD reactive-rotor gear stepping motor intended for smaller steps and higher speeds and (2) EShD

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UDC: 621.313.13 - 133.4

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ACC NR: AP6015344

permanent-magnet-rotor two-stator stepping motor intended for larger steps, higher torques, and quick response. They were developed in the Kiev Institute of Automatics. An RShD-10-FD-IV motor is intended for operation at a fixed frequency of 100 ± 2 cps; it is equipped with an electromagnetic detent and a damper. Technical characteristics of eight RShD and five EShD types are tabulated. The RShD types have: maximum static torque, 140-4500 g·cm; maximum operating speed, 100-3500 steps per sec; power consumption, 13-300 w. The EShD types have: maximum static torque, 1000-18000 g·cm; maximum operating speed, 500-1600 steps per sec; power consumption, 250-1000 w. Orig. art. has: 3 figures, 2 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 004

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Card 2/2

SOURCE CODE: UR/6105/66/006/006/0075/0093

ACC NO: AF7003101

AUTHOR: Karpenko, B. K.; Mal'kov, G. Ya.

ORIGIN: none

TITLE: Design of the basic dimensions of electric step-motors with active rotor

SOURCE: Elektrichestvo, no. 6, 1966, 75-83

TOPIC TAGS: electric motor, electrical engineering

ABSTRACT: The article presents a method for designing step-motors with permanent magnets mounted on the rotor and with 2-phase windings on the stator. The torque-angle characteristic is first assumed to be rectangular and the relation between performance parameters is easily established on this basis. An analysis of the triangular case and of the sinusoidal case, which approximates actual conditions, is difficult; appropriate correction factors are introduced in lieu of rigorous derivation. The overall rotor dimensions, i.e./ its diameter and length are determined on the basis of specified load conditions and torque requirements; the optimum geometry of rotor teeth (pole pieces) is determined next by graphical construction based on the demagnetization curve of the magnet material. Finally, the stator is designed around the rotor. A two-pole model is considered for illus-

UDC: 621.313.13-133.4

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KARENKO, B. S.

The metamorphism of uranium ores
A review with 20 references
// *Ukrainian Geol. Uran. Ind. No. 1, 1957*

Distr: U.S.S.R.

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66219

SOV/126-8-3-2/33

24.2200

AUTHORS: Berdyshev, A. A. and Karpenko, B. V.

TITLE: On the Role of Indirect Interaction in the Theory of the Magnetism of Transition Metals and Rare Earths.
1. Ferromagnetism

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 330-336 (USSR)

ABSTRACT: Usually the ferro and antiferromagnetism of transition metals is explained by the exchange interaction between the electrons of inner d-shells. If the exchange interaction integral between nearest neighbours is positive, then the metal is a ferromagnetic, while if it is negative the metal is antiferromagnetic. Such a treatment of magnetic properties meets with a number of difficulties. A large group of experimental data cannot be explained with the aid of the Bethe-Slater curve for the exchange integral of transition metals (Ref 1). Moreover, the majority of theoretical estimates of the exchange integral gives it a negative sign (Ref 2). Secondly, it has recently been found (Ref 3) that diluted alloys of manganese with noble metals are either ferro or antiferromagnetics. In these alloys the atoms

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On the Role of Indirect Interaction in the Theory of the Magnetism of Transition Metals and Rare Earths. 1. Ferromagnetism

of the transition metal are at such large distances from each other that direct exchange coupling between them is entirely excluded. Similarly, ferro and antiferromagnetism of rare earth metals cannot be explained by unusually weak direct coupling between magnetically active electrons. These considerations have led to a search for other possible mechanism of exchange coupling. One of such mechanisms is the indirect exchange interaction suggested by Zener (Ref 1). The present work is concerned with the effect of indirect interaction in the ferromagnetic problem. The theory is based on the s-d-exchange model of transition metals put forward by Vonsovskiy, his coworkers, and Berdyshev (Refs 4, 5). The Hamiltonian which describes the interaction between conduction electrons and spin waves in a ferromagnetic is given by Eqs (1) and (2) (Ref 4). In these equations $E_k = Ak^2$ is the translational energy of a conduction electron, A is the transport integral, $\epsilon_g = Jg^2$ is the energy of a spin wave, k and \vec{g} are the wave numbers of

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On the Role of Indirect Interaction in the Theory of the Magnetism of Transition Metals and Rare Earths. 1. Ferromagnetism

the electron and the spin wave (in units of the lattice constant), J is the d-d-exchange integral, $I(\vec{k}_1, \vec{k}_2)$ is the s-d-exchange integral, $a_{\vec{k}}$ and $a_{\vec{k}}(-)$ are the Fermi operators in the second quantization theory for conduction electrons with wave number \vec{k} and spin components $+1/2$ and $-1/2$ respectively, $b_{\vec{g}}$ are the Bose operators and N is the number of lattice sites. In previous papers on the s-d-exchange model (Refs 4 and 5) only the H_0 and H_2 components were taken into account which corresponds to taking into account in the energy first order corrections of the perturbation theory. The contribution due to the "triple" terms in the energy spectrum was not considered and it is the aim of the present work to elucidate the effect of these terms on the energy of the system and its magnetization. It is shown that the second approximation of the perturbation theory on the s-d-exchange model of transition metals leads to the appearance of an indirect interaction between d-electrons. When this interaction is taken into account the existence of ferromagnetism becomes possible in the

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On the Role of Indirect Interaction in the Theory of the Magnetism of Transition Metals and Rare Earths. 1. Ferromagnetism

case of complete absence of direct coupling or even negative d-d-exchange integral. An expression is derived for the d-d-exchange integral and this is given by Eq (11). From this expression it can be seen that in the present theory the energy of the spin wave is considerably altered in comparison with the exchange model. Firstly, the second order correction of the energy has led to the replacement of the integral of direct d-d-exchange coupling by a certain effective integral whose magnitude depends on the Fermi energy and the transport integral for conduction electrons. Secondly, the effective exchange integral is not very dependent on temperature. Finally, the second order correction of the energy completely cancels the effect of the first order correction so that the "zero" energy Δ_0 , which was considered earlier in Refs 4 and 5, is completely absent in the spin wave energy. This means that the spontaneous magnetization of d-electrons follows the $T^{3/2}$ law in contradiction to the results obtained in Refs 4 and 5 and this is entirely due

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On the Role of Indirect Interaction in the Theory of the Magnetism
of Transition Metals and Rare Earths. 1. Ferromagnetism

to the fact that the second order correction to the
energy completely cancels the first order correction.
There are 8 references, 3 of which are Soviet and
5 English.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo
(Urals' State University imeni A. M. Gor'kiy)

SUBMITTED: August 6, 1958

Card 5/5

21(8)

AUTHORS:

Berdyshev, A. A., Karpenko, B. V.

SOV/56-36-3-24/71

TITLE:

On the Indirect Interaction of d-Electrons of Transition Metals (O kosvennom vzaimodeystvii d-elektronov perekhodnykh metallov)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, pp 819-822 (USSR)

ABSTRACT:

The ferro- and antiferromagnetism of transition metals can be explained by the exchange interaction between the electrons of the internal d-shells of the atoms. The theoretical treatment of this problem by means of the exchange interaction integral meets with a number of difficulties (Ref 1). Thus, firstly, the large group of experimental data cannot be explained by the Bethe-Slater (Bete, Sleyter) curve for the exchange interaction integral of transition metals. Secondly, the majority of theoretical estimates of this integral leads to a negative sign (antiferromagnetic)(Ref 2), and, thirdly, diluted alloys of manganese with noble metals show ferro- or antiferromagnetism (Ref 3). In view of the fact that by means of this theory it is apparently not possible to describe these phenomena correctly, it is necessary to search for another form of

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On the Indirect Interaction of d-Electrons
of Transition Metals

SOV/56-36-3-24/71

representing the exchange interaction; the present paper makes a contribution in this direction. Zener (Ziner)(Ref 1) suggested the form of indirect exchange interaction which he investigated phenomenologically; the present paper uses it for the purpose of dealing with the ferromagnetic problem. The s-d model of the transition metals is treated on the basis of the perturbation theory in second approximation; this leads to indirect interaction between the d-electrons in which the conductivity electrons are involved. Thus, ferromagnetism would occur only if either s-d-coupling is completely absent ($J_{sd}=0$ for rare earths and diluted manganese solutions) or also if J_{dd} assumes a negative value. The conditions for ferromagnetism can be represented in the general form $J_{\text{eff}} = J + J^{(s)} > 0$.

Card 2/3

On the Indirect Interaction of d-Electrons
of Transition Metals

SOV/56-76-1-24/71

The effective exchange integral is found to be only weakly temperature-dependent, i.e. it becomes smaller with rising temperature. The authors finally thank S. V. Vonsovskiy and Ye. A. Turov for discussions and remarks. There are 8 references, 3 of which are Soviet.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet (Ural State University)

SUBMITTED: August 3, 1958 (initially) and January 14, 1959 (after revision)

Card 3/3

KARPENKO, B. V., Cand Phys-Math Sci -- (diss) "Interaction of conduction electrons with spin waves in ferro- and antiferromagnetic materials." Sverdlovsk, 1960. 9 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Uralskiy State Univ im A. M. Gor'kiy); 150 copies; price not given; (KL, 17-60, 139)

00211
S/126/60/009/04/001/033
E032/E435

24.2200

AUTHORS: Karpenko, B.V., Berdyshev, A.A., Zaks, R.B. and Noskova, L.M.

TITLE: The Role of Indirect Exchange Interaction in the Theory of the Magnetism of Transition Metals and Rare Earths
II. Antiferromagnetism

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 4, pp 481-487 (USSR)

ABSTRACT: In the previous paper (Ref 1) a study was made of the indirect interaction between d-electrons in the ferromagnetic problem. It was shown that the indirect interaction between electrons in inner and incompletely filled shells, in the atoms of transition metals and rare earths, favours the formation of a ferromagnetic state. In the present paper an estimate is made of the role of indirect interaction in setting up antiferromagnetic order. The Hamiltonian for an antiferromagnetic, according to the s-d exchange model put forward by Vonsovskiy (Ref 2), is of the form shown on p 481 where a_k and $a_k(-)$ are the Fermi second quantization operators for electrons with the momentum k and right

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E032/E435

The Role of Indirect Exchange Interaction in the Theory of the Magnetism of Transition Metals and Rare Earths II. Antiferromagnetism

and left spin orientations respectively. S_n is the spin operator for the n-th lattice site, J is the d-b exchange integral for two nearest neighbors, I is the s-d exchange integral (assumed independent of the momentum of conduction electrons), V is the volume of the system, $E_k = Ak^2$ is the energy of a conduction electron, A is the transport integral (Ref 3) and $S = 1/2$. The spin operators can be related to the Bose operators by the two equations at the bottom of p 481 and top of p 482. The Hamiltonian obtained in this way is shown at the top of p 482 where z is the number of nearest neighbors for a given atom,

$$\gamma_\lambda = \frac{1}{z} \sum_{\rho} e^{i\rho\lambda}$$

and ρ is the radius vector from the atom to its nearest neighbor atom. After diagonalization, the Hamiltonian can be thrown into the form shown at the bottom of p 482 where ϵ_λ and $g(\lambda)$ are defined by the

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E032/E435

The Role of Indirect Exchange Interaction in the Theory of the
Magnetism of Transition Metals and Rare Earths II. Antiferromagnetism

relations at the bottom of p 482. The energy of the system in an external magnetic field, the free energy and the magnetization are then calculated in a way similar to that employed in the previous paper (Ref 1). It is shown that if the interaction of spin waves with conduction electrons is taken into account, then the interaction between d-electrons is characterized not by the d-d exchange integral but by a certain effective exchange integral J_{eff} which is given by Eq (6), in which ξ is the chemical potential of the conduction electrons. It follows from this equation that in the absence of direct d-d exchange interaction, the integral J_{eff} is negative, which means that the energy of the spin wave also becomes negative and an antiferromagnetic state cannot be reached. It is concluded that indirect exchange interaction in general favours ferromagnetism and this agrees with Zener's hypothesis. The electronic specific heat of transition metals is also affected by indirect interaction. The interaction of conduction electrons with spin waves in

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E032/E435

The Role of Indirect Exchange Interaction in the Theory of the
Magnetism of Transition Metals and Rare Earths II. Antiferromagnetism

ferro and antiferromagnetics introduces an extra turn into the specific heat equation. It is suggested that by separating out the linear term in the experimental determination of the specific heat of a dilute alloy and by comparing it with the corresponding linear term in the specific heat equation for a pure metal, it may be possible to estimate the magnitude of the exchange integral I . There are 8 references, 2 of which are Soviet, 1 German in Russian translation and 5 English.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo
(Ural State University imeni A.M.Gor'kiy)

SUBMITTED: January 25, 1959

Card 4/4

4

80536

S/126/60/009/05/022/025

E073/E335

24.7700

AUTHOR: Karpenko, B.V.

TITLE: On the Problem of the Existence of a Superconducting
State in Antiferromagnetic Metals 18

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 5,
pp 794 - 795 (USSR)

ABSTRACT: So far, no superconducting antiferromagnetic metals have been detected and therefore it is of interest to investigate the criterion of superconductivity in these. In the antiferromagnetic metal interactions of conductivity electrons with spin waves occur which are specific for such metals. In this brief note, the author investigated mathematically the problem of the influence of this interaction on the occurrence of a superconducting state. It is shown that electron-magnon interaction leads to effective interaction of electrons with pulses of opposite polarity and spins and this interaction is repulsive in character in contrast to the electron-phonon interaction. The bond energy of the Cooper electron pair, forming as a result of electron-phonon interaction, can only decrease and the pair can generally be annihilated as a result of scattering

Card1/2

80536
S/126/60/009/05/022/025

On the Problem of the Existence of a Superconducting State in Antiferromagnetic Metals

of electrons on the spin waves. The repulsive character of the electron-electron interaction, due to exchange with spin waves, is explained by the fact that the scattering of electrons is accompanied by spin flip. If one of the electrons of a Cooper pair is scattered on a spin wave, it changes the direction of its spin; electrons with parallel spins cannot form a conjugate pair. There are 2 references, 1 of which is Soviet and 1 English.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal Physics of the Ac.Sc., USSR)

SUBMITTED: January 15, 1960

Card 2/2

✓

85396

9.4300 (3203, 1144, 1138)

S/126/60/010/002/023/028/XX
E032/E414AUTHOR: Karpenko, B. V.

TITLE: On the Existence of Superconducting Antiferromagnetics 21

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.2,
pp.301-302

TEXT. The superconductivity criterion for antiferromagnetic materials was discussed by the present author in Refs.1 and 2. In Ref.2 use was made of a reduced electron-electron Hamiltonian describing the interaction between electrons with opposite momenta and spins due to spin-wave exchange effects in antiferromagnetics. The positive sign of the effective interaction potential showed that electrons forming a Cooper pair repel each other as a result of scattering on magnons. In the present note the author discusses the effect of inelastic scattering of electrons by magnons on the appearance of superconductivity, using the method proposed by Bogolyubov in Ref.3. The Hamiltonian for the electron-phonon-spin-wave system consists of three parts (p.301) and includes the s - d exchange integral I , the electron-phonon coupling constant g , the chemical potential of conduction electrons μ , and the number of nearest neighbours z . The Bogolyubov transformation is then applied and the transformed Hamiltonian

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On the Existence of Superconducting Antiferromagnetics

is quoted at the bottom of p.301. It is shown that the energy gap Δ separating the first excited state from the ground state is given by

$$\Delta = \tilde{\omega} \exp \left\{ -\frac{1}{\beta} \right\}$$

where

$$\beta = \beta_{ph} + \beta_a; \quad \beta_{ph} = \frac{g^2 K_F^2}{2\pi^2 E_c(K_F)}, \quad \beta_a = \frac{I^2 K_F^2}{z|j|\pi^2 E_c(K_F)}$$

where j represents the effective $d-d$ coupling. The quantity $\tilde{\omega}$ is equal to the width of the energy interval in which electron-phonon and electron-magnon interactions are effective. Since $\beta_a > 0$, it follows that the additional scattering on spin waves reduces the magnitude of the energy gap, i.e. it hinders the appearance of superconductivity. For sufficiently strong $s-d$ exchange effects ($\beta_a > \beta_{ph}$) superconducting state cannot exist at all. Acknowledgments are made to V.A.Moskalenko and V.V.Tolmachev for Card 2/3

85973

24-2200

1144, 1395, 1482, 1162

S/126/60/010/005/028/030
E032/E414

AUTHOR: Karpenko, B.V.

TITLE: The Effect of Scattering of Conduction Electrons by Spin Waves in a Ferromagnetic on the Temperature of Transition to the Superconducting State

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.5, pp.794-796

TEXT: Following the discovery of superconducting ferromagnetics by Matthias et al (Ref.1), the problem of the connection between superconductivity and ferromagnetism has acquired a considerable interest. Vonsovskiy and Svirskiy (Ref.2) have shown that the magnetization of the conduction electrons by the exchange "field" prevents the formation of a superconducting state. However, no one has so far investigated the effect of inelastic scattering of conduction electrons by spin waves of the superconductivity of a ferromagnetic. The present author investigates this problem using the Hamiltonian of the s - d exchange model put forward by Vonsovskiy and Turov in Ref.3. The Hamiltonian is simplified by neglecting terms responsible for the magnetization and retaining terms responsible for inelastic scattering. This simplification is

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65973

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E032/E414

The Effect of Scattering of Conduction Electrons by Spin Waves in a
Ferromagnetic on the Temperature of Transition in the
Superconducting State

said to be justified by the fact that the role of the neglected
terms has already been investigated by Vonsovskiy and Svirskiy
(Ref.2) and the analysis would only be complicated by them without
altering the overall qualitative picture. The results obtained
from this analysis are in complete agreement with the results of
Kasuya (Ref.8) who showed that spin wave exchange leads to an
effective repulsion in the case of electrons with opposite momenta
and spins in the neighbourhood of the Fermi surface. It is shown
that electron-magnon interaction prevents the transition to
superconducting states. There are 8 references: 5 Soviet and
3 Non-Soviet).

ASSOCIATION: Ural'skiy gosuniversitet im. A.M.Gor'kogo
(Ural State University im. A.M.Gor'kiy)

SUBMITTED: April 19, 1960

Card 2/2

82423

S/056/60/038/03/24/033
B006/B014

24-2200

AUTHORS: Karpenko, B. V., Berdyshev, A. A.

TITLE: Indirect Interaction of d-Electrons in Transition Metals.
II. Antiferromagnetism

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 3, pp. 925-928

TEXT: In continuation of a previous paper (Ref. 1) in which the necessity of investigating the indirect interaction between electrons of unfilled inner atomic shells of transition metals (d-electrons) and rare earths (f-electrons) has been pointed out, the present paper describes a study of the role played by indirect interaction between d-electrons in connection with the antiferromagnetic state. The ansatz for the Hamiltonian of an antiferromagnetic body in the s-d exchange model, on which the theoretical study is based, was taken from a paper by S. V. Vonsovskiy (Ref. 2). The investigation is carried out by perturbation-theoretical methods. Contrary to what was done in Ref. 1, the perturbation theory is not applied to an arbitrarily chosen spectrum, but to a certain unperturbed

Card 1/2

X

KARPENKO, B. V.

S/020/60/132/04/17/064
B014/B007

AUTHORS: Vonsovskiy, S. V., Corresponding Member of the AS USSR,
Berdyshev, A. A., Izyumov, Yu. A., Karpenko, B. V.,
Polyak, Yu. Ya.

TITLE: Exchange Interaction of Inner and Outer Electrons in Trans-
ition Metals

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4, pp. 797-800

TEXT: In the electron spectrum of metallic crystals which are composed of elements of the transition group and of the rare-earth group, special properties are observed compared to the crystals of other metals. This is brought into connection with the d- and f-shells of the electron sheath. The electron density of the transition metals is divided into three regions. The first is near the nucleus, the second consists of the valence electrons, and the third intermediate region consists of the electrons of the non-closed shells. For this system the Hamiltonian (1) is written down. The present paper describes the influence exerted by the non-diagonal terms in (1) upon the development of the exchange coupling, i.e., on the

Card 1/3

KARPENKO, B.V.; BERDYSHEV, A.A.

Exchange interaction through current carriers in ordered semi-conducting magnetic materials. Fiz. tver. tela 5 no.10:3026-3028 0 '63. (MIRA 16:11)

1. Institut fiziki metallov AN SSSR i Ural'skiy gosudarstvennyy universitet im. A.M. Gor'kogo, Sverdlovsk.

KARPENKO, B.V.; BERDYSHEV, A.A.

Indirect exchange interaction via current carriers in semiconductors.
Fiz. tver. tela 5 no.12:3397-3405 D '63. (MIRA 17:2)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo, Sverdlovsk.

L 15670-66 EWT(m)/T

ACC NR: AP6000202

SOURCE CODE: UR/0056/65/049/005/1463/1469 ^{3/6}

AUTHORS: Karpenko, D. Ya.; Yaroshenko, A. P.

ORG: Dnepropetrovsk State University (Dnepropetrovskiy gosudarstvennyy universitet)

TITLE: Vector meson in a Coulomb field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1463-1469

TOPIC TAGS: vector meson, boson, matrix function, quantum mechanics, spinor, Coulomb field, integral equation

ABSTRACT: The authors show that Kepler problem for a boson can be solved in simpler fashion in the Kemmer representation, using for this purpose the theory developed for projection operators by A. A. Borgardt (Algebraicheskiye metody v teorii chastits tselogo spina [Algebraic Methods in the Theory of Particles with Integer Spins], Dnepropetrovsk, 1964). In particular, the motion of bosons of spins 0 and 1 in a Coulomb field is treated on the basis of a 16-row Kemmer representation. The properties of the spin-angle functions involved in the calculations are described and the integrals of motion which completely classify the states are deter-

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ACC NR: AP6000202

mined. The radial and angular parts of the initial equation can be separated by employing the integrals of motion and a set of projection operators. The method is compared with that used for a spinor particle. Authors are grateful to A. A. Borgardt for discussions of the results of the paper and for valuable remarks. Orig. art. has: 41 formulas.

SUB CODE: 20,12/ SUBM DATE: 24Feb65/ ORIG REF: 003/ OTH REF: 004

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Card 2/2

L 33289-66 EWT(1) GG

ACC NR: AP5014057

SOURCE CODE: UR/0056/66/050/004/1167/1170

AUTHORS: Borgardt, A. A.; Karpenko, D. Ya.

ORG: Dnepropetrovsk State University (Dnepropetrovskiy gosudarstvennyy universitet)

TITLE: Bosons in the field of a plane electromagnetic wave

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 4, 1966, 1167-1170

TOPIC TAGS: boson, electromagnetic wave, relativistic electron, algebra

ABSTRACT: The authors obtain a solution of the Kemmer equation for a boson in the field of a plane wave in terms of reducible representations. These representations satisfy, besides the well known rules of the Kemmer algebra, also relations that were obtained in an earlier paper by one of the authors (Borgardt, Dissertation, Dnepropetrovsk State University, 1964). The solution obtained applied to all types of Kemmer bosons (vector, pseudoscalar, axial vector, and scalar). The irreducible parts of the representations are separated by means of the projection operators presented earlier in a paper by the other author

Card 1/2

L 33289-66

ACC NR: AP6014057

(Karpenko, with Ya. P. Yaroshenko, ZhETF v. 49, 1463, 1965). The authors are grateful to Ya. P. Yaroshenko for checking the calculations and for a number of important corrections and remarks. Orig. art. has: 27 formulas.

SUB CODE: 20/ SUBM DATE: 26Nov65/ ORIG REF: 003/ OTH REF: 001

Card

2/2

py

KARPENKO, E.K.

USSR/General Problems of Pathology - Allergy.

S-2

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71367

Author : Karpenko, E.K.

Inst :

Title : Dynamics of Tuberculin Allergy in Osteo-Vascular
Tuberculosis in Different Treatments.

Orig Pub : Materialy po obmeny nauch. inform. Ukr. in-ta tuberkulyo-
za, 1955, vyp. 2, 111-117

Abstract : No abstract.

Card 1/1

- 16 -

KARPENKO, E.P.; KHOVANSKAYA, M.G.

Effect of penicillin on tissue respiration in healthy animals and in animals in a state of shock. Antibiotiki 7 no.6:522-527 Je '62.

(MIRA 15:5)

1. Kafedra obshchey khirurgii (zav. - prof. V.A.Ivanov), Tsentral'naya nauchno-issledovatel'skaya laboratoriya (zav. E.M.Kogan) II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.

(PENICILLIN)

(SHOCK)

(CELL METABOLISM)

IVANOV, V.A., professor (Moskva, G-19, ul. Mayakovskogo, d.37, kv.47);
KARPENKO, E.P.; LYUBSKIY, A.S.; STANISHEVSKIY, Yu.A.

Use of penicillin in surgery. Vest.khir. 89 no.7:74-79 J1 '62.

(MIRA 15:8)

1. Iz kliniki obshchey khirurgii (zav. - prof. V.A. Ivanov)
lechebnogo fakul'teta 2-go Moskovskogo meditsinskogo instituta
im. N.I. Pirogova.

(PENICILLIN)

(SURGERY, OPERATIVE)

KARPENKO, E. R.

Vol. 48 No. 9
May 10, 1954
Foods

Ⓢ
The size of tomatoes and their content of solids. Yu.
E. Chirikov, E. I. Novitskaya, and E. R. Karpenko. *Vege-*
table Selection Research Sta., Dnepropetrovsk. Doklady
Vsesoyuz. Akad. Sel'kokhoz. Nauk im. V. I. Lenina 18,
No. 7, 23-5 (1953).—Large-size tomatoes contain more
sugars and reduced forms of ascorbic acid (vitamin C) and
less acid. The percentage of total solids is higher in the
50-100-g. tomatoes. J. S. Joffe

SELIVANOV, Yu.P.; KARPENKO, E.S.; MIKULIN, E.V.

New method of logarithmic conversion in densitometers with
direct reading. Zhur.nauch.i prikl.fot.i kin. 7 no.6:447-453
N-D '62. (MIRA 15:12)

1. Moskovskiy poligraficheskiy institut i Ukrainskiy nauchno-
issledovatel'skiy institut poligraficheskoy promyshlennosti.
(Densitometers)

KARFEMKO, F. A.

Certain Results of the Engineering-Geological and Hydrogeological Operations of the Affiliate to the State Planning Institute for Nonferrous Metallurgical Enterprises During 1951-1952. Materialy po inzh. geologii, No 3, 1953, 7-9.

Methods of mathematical statistics were used to study the laws governing the various properties of loess rocks and to investigate the settling and sagging properties of loess rocks steeped by waters of various compositions. Complex field and laboratory studies on loess rocks were conducted in Central Asia to establish the dependence of sagging and settling of loess rocks upon their genesis. (RZhGeol, No 1, 1954)

SO: W-31128, 11 Jan. 55

BARPENIN, F. A.

Problems in the Study of Engineering-Geological and Hydrogeological
Conditions for the Construction of Nonferrous Metallurgical Enterprises.
Materialy po inzh, geologii, No 4, 1953, 7-15

Most of the nonferrous metallurgical enterprises are located in the
southern mountainous regions of the USSR, regions with sharply-cut relief and dry climate.
Procedures for engineering-geological investigations in these regions have been
weakly developed; the most important objects for study are the following six:
properties of mountain looses, saline foundations, excavations, mud flows, fracturing of
rocks, cherts. (EZhgeol, No 1, 1954)

SG: W-31128, 11 Jan. 55

100-101000-100
DUNDUKOV, M.D., inzhener; SAMSONOV, V.N.; KARPENKO, P.A.; KRIGER, N.I.;
KUZ'MIN, P.G., kandidat tekhnicheskikh nauk; SHEL'YAPIN, R.S.,
kandidat tekhn. nauk; MAKSIMOV, O.N., inzhener; MALYSHEV, M.I.,
professor; RODSHTEYN, A.G., kandidat tekhn. nauk; GOL'DSHTEYN, M.N.
professor; ABELEV, Yu.M., professor.

Discussion of the problem of building on coarsely porous settling
soils. Stroi. prom. 33 no.5:40-45 My '55. (MLRA 8:6)
(Soil mechanics)

KARPENKO, G.A., inzh.

Large blocks made of autoclave hardened foamed slag. Biul.stroi.
tekh. 12 no.8:9-10 Ag '55. (MIRA 12:1)

1. Trest No.10 Glavspetsstroya.
(Slag) (Concrete blocks)

Handwritten: 11
KARPENKO, G.A., inzh.

Improving the system of regeneration in sodium cation filters.
Energetik 5 no.10:12-13 0 '57. (MIRA 10:12)
(Water--Purification)

KARPENKO, G.A.;TURKEVICH, N.M.

New printing of VIII issue, 1952, Pharmacopeia of USSR and its first supplement. Aptech. delo, Moskva 2 no. 1:59-64 Jan-Feb 1953.
(CLML 24:1)

1. Docents. 2. Of the Pharmacy Faculty of L'vov Medical Institute (Director -- Prof. L. N. Kuzmenko), Ministry of Public Health Ukrainian SSR.

GSIDETS, I.R., kandidat farmatsevticheskikh nauk; KARPENKO, G.A., dotsent, zavednyushchiy Kafedry tekhnologii lekartstvennykh form i galenovykh preparatov L'vovskogo meditsinskogo instituta; KUZMENKO, L.N., profesor, direktor L'vovskogo meditsinskogo instituta.

Studies on glucoside extracts from water pepper herbs. Apt.delo 2 no.2:
41-45 Mr-Ap '53. (MLBA 6:5)

1. Kafedra tekhnologii lekarstvennykh form i galenovykh preparatov L'vovskogo meditsinskogo instituta Ministerstva zdravookhraneniya USSR.
(Glucosides) (Persicaria)

KARPENKO, Georgiy Alekseyevich; TURKEVICH, Nikolay Mikhaylovich

[Antagonism of drugs and their incompatible combinations]

Antagonizm lekarstvennykh veshchestv i ikh nesovmestimye
sochetaniia. Kiev, Gos.med.izd-vo USSR, 1958. 261 p. (MIRA 12:2)
(DRUGS)

VAGER, R.M.; KARPENKO, G.A.

Chemical structure of the mosaic virus of winter wheat. Vop.
virus 7 no.4:106-109 J1-Ag '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fitopatologii.
(NUCLEIC ACIDS) (MOZAIC DISEASES) (WHEAT—DISEASES AND PESTS)

ATABEKOV, I.G.; KARPENKO, G.A.; NOVIKOV, V.K.

Some adsorptive properties of calcium phosphate and their use in determining the nucleotide composition of ribonucleic acid. *Biokhimiia* 28 no.3:517-523 My-Je '63. (MIRA 17:2)

KARPENKO, G. B.

What retards the development of scientific research and its utilization in industry. Visnyk AN URSS 27 no.5:70-72 My '56. (MLRA 9:8)
(Ukraine--Research)

~~KARPENKO, G.B.~~; ABRAMOV, N.M.

Technical requirements for a dental cement. Stomatologia no.6:
16-18 N-D '54. (MLRA 8:1)

1. Iz kafedry terapevticheskoy stomatologii (zav.-dotsent
T.T.Shkolyar) Leningradskogo meditsinsko stomatologicheskogo
instituta.

(DENTAL CEMENTUM
required qualities)

ABRAMOV, N.M.; KARPENKO, G.B.

Testing dental cements. Stomatologiya no.4:10-14 J1-Ag '55.
(MLRA 8:10)

1. Iz kafedry terapevticheskoy stomatologii (zav.--dotsent
T.T.Shkolyar) Leningradskogo meditsinskogo stomatologicheskogo
instituta (dir.--prof. P.I.Gavrilov)
(DENTAL MATERIAL,
cements, testing technics)

ABRAMOV, N.M.; KARPENKO, G.B.

Necrosis of the dental pulp under silicate cement fillings.
Stomatologiya no.5:21-22 S-0 '55. (MLRA 9:2)

1. Iz kafedry terapevticheskoy stomatologii (zav.-T.T. Shkolyar)
Leningrađskogo meditsinskogo stomatologicheskogo instituta (dir.-
prof. R.I. Gavrilov)

(INLAYS,

silicate cement, causing dent. pulp necrosis)

(DENTAL PULP, diseases,

necrosis under silicate cement inlays)

KARPENKO, G. B.

11/2/5064

"Dokl. Akad. Nauk SSSR" Sulfur Thiophene, Alpha Phenyl

501 49

"Study of the Interaction of Sulfur with Unsaturated Compounds: III, Synthesis of Alpha-Phenylthiophene," M. G. Veronkov, A. S. Brown (Deceased), G. B. Karpenko, E. I. Gal'shteyn, Chair of Org Chem, Leningrad Uni of Lenin State U bent A. A. Zhdanov, S 1 pp

"Zhur Obshch Khim" Vol XIX, No 7

Interaction of sulfur with three isomers of 1-phenylbutane (1-phenylbutene-1, 1-phenylbutene-2, and 1-phenylbutene-3), 1-phenylbutadiene-1,3, and 1-phenylbutane produced alpha-phenylthiophene in all five cases. Then devised a simple method for synthesizing this product, and offered an explanation of the mechanism of its formation from aliphatic-aromatic hydrocarbons. Submitted 28 Apr 48.

11/2/5064

KARPENKO, G. B.

"Study of the Interactivity of Sulfur with Unsaturated Compounds. IV. Phenyl-substituted 1,2-dithiol-3-thiones."
Voronkov, M. G., Brown, A. S. (deceased), and Karpenko, G. B. (Chair Org Chem, Leningrad State Order of Lenin U) (p. 1927)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1949, Vol. XIX, No. 10

KARPENKO, G.B.

USSR/Chemistry - Destructive hydrogenation

Card 1/1 Pub. 151 - 17/38

Authors : Voronkov, M. G.; Dolgov, B. N.; and Karpenko, G. B.

Title : Destructive hydrogenation of tetraethylsilane

Periodical : Zhur. ob. khim. 24/2, 269-272, Feb 1954

Abstract : The reaction of hydrogenation of tetraethylsilane in the vaporous phase was investigated at normal pressures. It was established that the absence of catalysts does in no way change the tetraethylsilane hydrogen even at a temperature of 500°. A temperature much higher than 500° results in the pyrolysis of the tetraethylsilane and the formation of elementary Si and some gaseous products. At a temperature of about 550° the tetraethylsilane is split by the hydrogen over an $Al_2(SiO_3)$ catalyst forming triethylsilane and ethane. The mechanism of destructive hydrogenation of tetraethylsilane is explained. Seven references: 3-USA; 2-German; 1-French and 1-USSR (1904-1950). Tables.

Institution : The A. A. Zhdanov State University, Leningrad

Submitted : October 3, 1953

KARPENKO, G. B.

AUTHORS: Voronkov, M. G., and Karpenko, G. B.

79-2-10/58

TITLE: Investigation of Alkoxysilanes Part 6. Synthesis of Tetraaroxysilanes by the Re-esterification of Ethyl Silicic Ether with Phenols (Issledovaniya v oblasti alkoksisilanov pereesterifikatsiyey kremneetilovogo efira fenolami)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 325-327 (U.S.S.R.)

ABSTRACT: Experiments showed that ethyl silicic ether in the presence of a homologous sodium phenolate reacts easily with phenols of different structures. This reaction was considered to be very simple and also suitable for the synthesis of tetraaroxysilanes with yields of about 70 - 85%. By employing this reaction method, the authors synthesized eleven tetraaroxysilanes as well as orthosilicic ethers of cyclohexanol, cyclopentanol and benzyl alcohol.

The physico-chemical properties of the tetraaroxysilanes obtained are described in a table. When exposed to ultraviolet light, all tetraaroxysilanes give a light blue or dark blue as well as a violet fluorescence.

Card 1/2

ROSKIN, Ye.S.; KARPENKO, G.B.

Influence of the $K_2S_2O_8 - K_2S_2O_5$ oxidation-reduction system on the kinetics of the static polymerization of acrylonitrile.

Izv. vys. ucheb. zav.; khim. i khim. tekhn. 4 no. 2:280-282

'61.

(MIRA 14:5)

1. Leningradskiy tekstil'nyy institut. Kafedra fizicheskoy i kolloidnoy khimii.

(Acrylonitrile) (Polymerization)

(Oxidation reduction reaction)

S/080/62/035/010/009/012
D204/D307

AUTHORS: Roskin, Ye.S., Mushenko, D.V., Vishnievskiy, N.Ye.,
Karpenko, G.B. and Dergachev, R.D.

TITLE: Study of the effects of hydrodynamic conditions on
the polymerization of acrylonitrile

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 10, 1962,
2328-2332

TEXT: The present work was concerned with the effects of stirring on the polymerization reactions of acrylonitrile in aqueous solutions (7%), owing to the increasing importance of such polymers in the production of artificial fibers. The reactions were carried out under argon in a stainless steel autoclave, with stirring (2800 rpm, Re being 4000 or 46000), at 15 - 45°C, under isothermal conditions. Similar experiments were carried out under static conditions, in air and in argon. K_2MnO_4 and oxalic acid were used as initiators. In stirred solutions, after 15 min reactions, the yields increased from ~ 20% at 15°C to ~ 60% at 30° and fell to

Card 1/2

S/080/62/035/010/009/012
D204/D307

Study of the effects ...

~ 47% at 45°C. The corresponding figures after a 40 min reaction were ~ 49, 70 and 50% respectively, tending to be always slightly lower in the more intensively stirred solutions. Yields of statically carried out reactions under argon were on the average ~ 10% higher than the above, and were higher still when the polymerization took place (still without stirring) in air. In small amounts, oxygen improves the yields, but reverses its action and even stops the reaction completely when introduced in large amounts, e.g. by stirring in systems open to the atmosphere. There are 3 figures and 1 table.

ASSOCIATION: Leningradskiy tekstil'nyy institut im. S.M. Kirova (Leningrad Institute im. S.M. Kirov); Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov (All-Union Scientific Research Institute of Petrochemical Processes)

SUBMITTED: July 5, 1961

Card 2/2

ROSKIN, Ye.S.; MUSHENKO, D.V.; VISHNEVSKIY, N.Ye. + ~~KARPENKO, G.B.~~;
DERGACHEVA, R.D.

Effect of a hydrodynamic regime on the polymerization of
acrylonitrile. Zhur.prikl.khim. 35 no.10:2328-2332 0 '62.
(MIRA 15:12)

1. Leningradskiy tekstil'nyy institut imeni S.M.Kirova i
Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh
protseessov.

(Acrylonitrile) (Polymerization) (Hydrodynamics)

ROSKIN, Ye.S.; KARPENKO, G.B.

Initiation redox system $K_2S_2O_8 - Na_2S_2O_4$ and its effect on the kinetics of the static polymerization of acrylonitrile.

Izv. vys. ucheb. zav.; khim. i khim. tekhn. 7 no.3:523-527

'64.

(MIRA 17:10)

1. Leningradskiy institut tekstil'noy i lekkooy promyshlennosti imeni Kirova, kafedra fizicheskoy khimii.

KARPENKO, G.I. [Karpenko, H.I.]

Rolling instead of honing. Mekh. sil'. hosp. 12 no. 2:15-17 F '61.
(MIRA 14:4)

1. Golovniy inzhener vantazhnogo avtoparku No.3 Golobkiiavtotransu.
(Mototrucks--Engines)

KARPENKO, G.M., inzhener-podpolkovnik; RYTOV, L.A., inzhener-kapitan

Use of long lines in the antenna feeder systems of a radar
station. Vest. protivovozd. obor. no.8:43-46 Ag '61. (MIRA 14:8)
(Radar, Military)

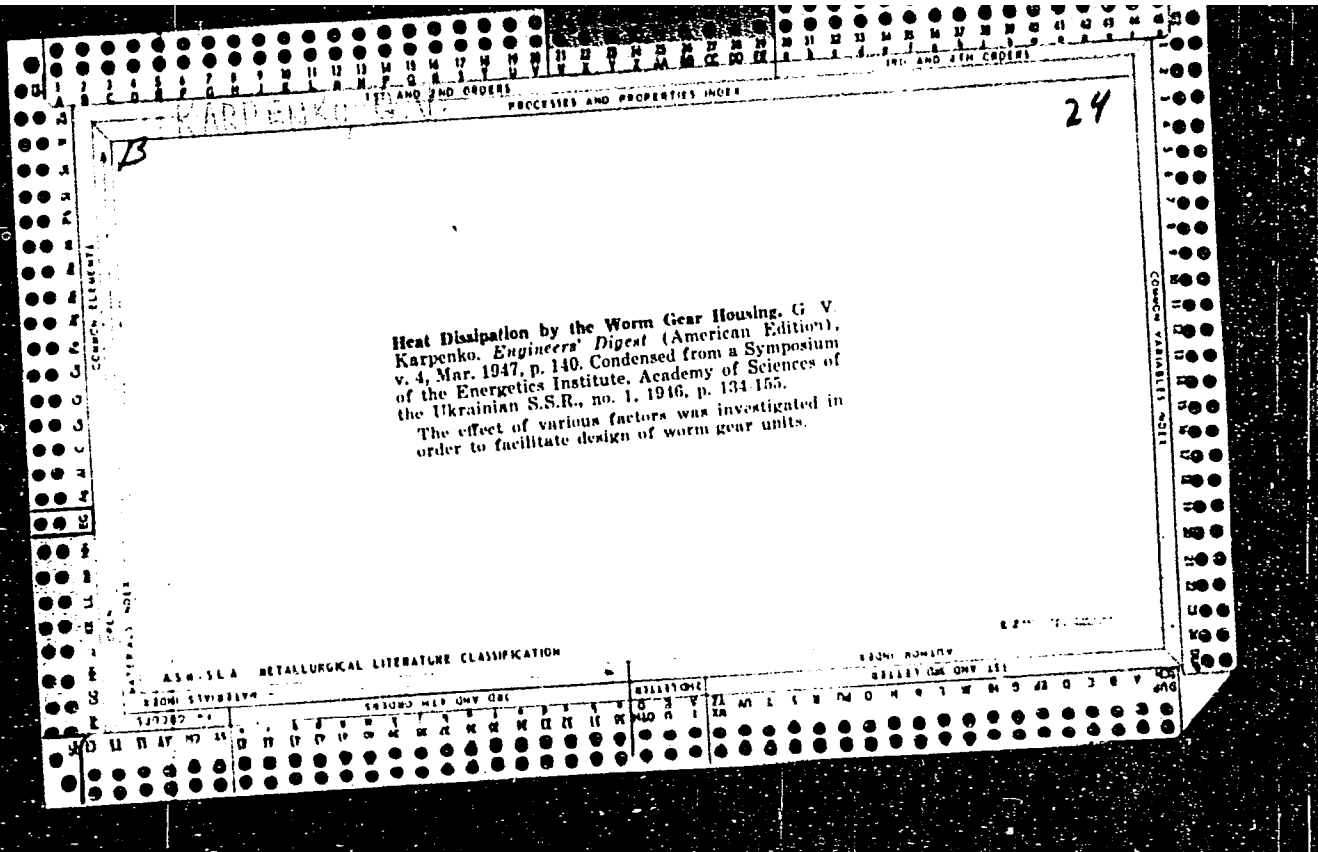
KARFENKO, G.P., mladshiy nauchnyy sotrudnik

Our experience in the control of shield bugs. Zashch. rast. ot
vred. i bol. 6 no.5:19-20 My '61. (MIRA 15:6)
(Eurygasters)

KARPENKO, G.V. [Karpenko, H.V.], doktor tekhn. nauk

Increasing labor productivity in the national economy is the important objective of scientific institutions. Visnyk AN URSS 30 no.7: 21-24 J1 '59. (MIRA 12:10)

(Labor productivity)



KARPENKO, G. V.

Dec 48

USSR/Academy of Sciences
Medicine -- Heredity, Mechanism

"The Meeting of the Presidium of the Academy of Sciences Ukrainian SSR, Devoted to the Question of the State and Tasks of the Biological Sciences in the Institutes and Institutions of the Academy of Sciences Ukrainian SSR," G. V. Karpenko, 1 p

"Priroda" No 12
Conference convened in Kiev 4-6 Oct 48. Discussed status of biological sciences in the Ukrainian SSR in the light of Lysenko's and Michurin's theories. Conference was dismayed that so many

prizes and awards had been given scientists who were following the bourgeois anti-Michurinian theory in biology.

25/4974

KARPENKO, G.V.

Effect of surfactants on the fatigue strength of metals. Dep. AN URSSR
no.3:39-43 '49. (MLRA 9:9)

1. Institut budivel'noi mekhaniki AN URSSR. Predstaviv diysniy chlen
AN URSSR F.P. Belyankin.
(Surface-active agents) (Metals--Fatigue)